

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: METALUX

Report Number: P730952

Luminaire Tested: **HBLED-LD5-36HE-N-UNV-L735**

Issue Date: 11/13/2023

**Test Information**

Test Method: LM-79-08  
Report Number: P730952  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P23767)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/13/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: HBLED-LD5-36HE-N-UNV-L735  
Description: 36000 LUMEN, HE HBLED WITH NARROW DISTRIBUTION  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 35418.0 lumens  
Efficiency: N/A  
Efficacy: 168.7 lumens/watt  
Spacing Criteria (0/90/45): 1.27 / 0.62 / 0.77  
Luminous Opening: Rectangular (W 1.67' x L: 4' x H: 0')  
CIE Type: Direct

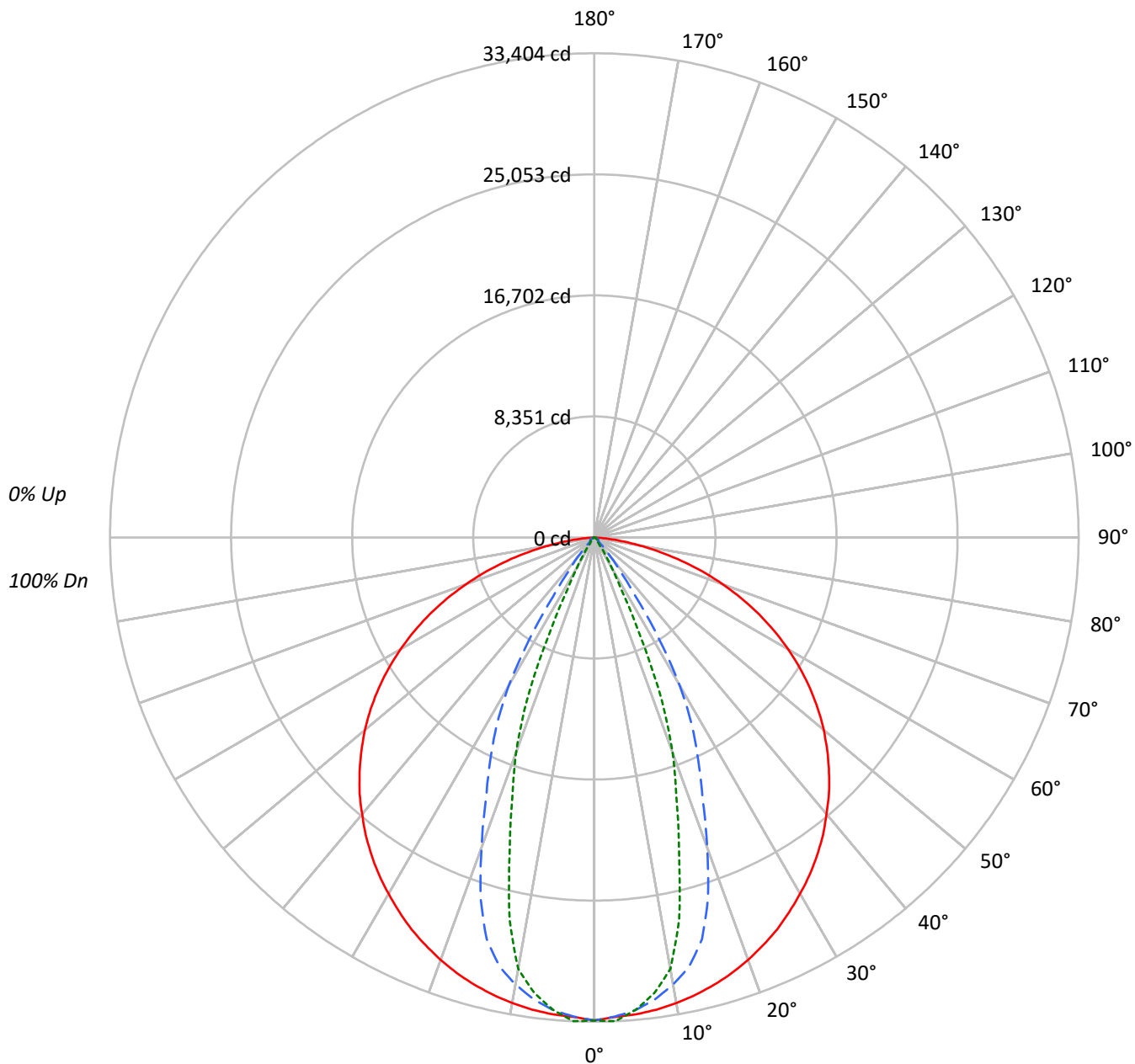
Input Watts (W): 210  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|
| RF  | 20  |     |     |     | 20  |     |     |     |     | 20  |     |     |     |     | 20  |     |     |     |    | 20 |
| RC  | 80  |     |     |     | 70  |     |     |     |     | 50  |     |     |     |     | 30  |     |     |     |    | 10 |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30 | 10 |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |    |    |
| 1   | 112 | 108 | 105 | 102 | 109 | 106 | 103 | 101 | 102 | 100 | 98  | 98  | 96  | 95  | 95  | 93  | 92  | 90  |    |    |
| 2   | 105 | 98  | 93  | 89  | 102 | 97  | 92  | 88  | 93  | 89  | 86  | 90  | 87  | 84  | 87  | 85  | 82  | 81  |    |    |
| 3   | 98  | 90  | 84  | 79  | 96  | 88  | 83  | 78  | 86  | 81  | 77  | 83  | 79  | 76  | 81  | 77  | 74  | 73  |    |    |
| 4   | 92  | 82  | 76  | 70  | 90  | 81  | 75  | 70  | 79  | 73  | 69  | 77  | 72  | 68  | 75  | 71  | 67  | 66  |    |    |
| 5   | 86  | 76  | 69  | 64  | 84  | 75  | 68  | 63  | 73  | 67  | 63  | 71  | 66  | 62  | 70  | 65  | 62  | 60  |    |    |
| 6   | 81  | 70  | 63  | 58  | 79  | 70  | 63  | 58  | 68  | 62  | 58  | 66  | 61  | 57  | 65  | 60  | 57  | 55  |    |    |
| 7   | 76  | 66  | 58  | 54  | 75  | 65  | 58  | 53  | 63  | 57  | 53  | 62  | 57  | 53  | 61  | 56  | 52  | 51  |    |    |
| 8   | 72  | 61  | 54  | 49  | 71  | 61  | 54  | 49  | 59  | 53  | 49  | 58  | 53  | 49  | 57  | 52  | 49  | 47  |    |    |
| 9   | 68  | 57  | 51  | 46  | 67  | 57  | 50  | 46  | 56  | 50  | 46  | 55  | 49  | 46  | 54  | 49  | 45  | 44  |    |    |
| 10  | 65  | 54  | 47  | 43  | 64  | 53  | 47  | 43  | 53  | 47  | 43  | 52  | 46  | 43  | 51  | 46  | 42  | 41  |    |    |

**AVERAGE LUMINANCE (cd/sqm):**

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 53803 | 53803 | 53803 |
| 5°  | 53515 | 53042 | 53019 |
| 10° | 53481 | 51343 | 49541 |
| 15° | 53406 | 47966 | 37704 |
| 20° | 53282 | 39102 | 27139 |
| 25° | 53146 | 30234 | 13369 |
| 30° | 52911 | 21973 | 4336  |
| 35° | 52786 | 9748  | 1116  |
| 40° | 52510 | 3959  | 752   |
| 45° | 52275 | 1111  | 800   |
| 50° | 51867 | 788   | 888   |
| 55° | 51120 | 937   | 379   |
| 60° | 49858 | 1044  | 231   |
| 65° | 47807 | 666   | 273   |
| 70° | 44414 | 592   | 337   |
| 75° | 38854 | 445   | 464   |
| 80° | 29051 | 546   | 664   |
| 85° | 14390 | 704   | 880   |



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**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 3092.4  | 8.7       |
| 10°-20°   | 7732.6  | 21.8      |
| 20°-30°   | 8375.5  | 23.6      |
| 30°-40°   | 6202.4  | 17.5      |
| 40°-50°   | 4467.4  | 12.6      |
| 50°-60°   | 2766.2  | 7.8       |
| 60°-70°   | 1701.2  | 4.8       |
| 70°-80°   | 896.8   | 2.5       |
| 80°-90°   | 183.6   | 0.5       |
| 90°-100°  | 0.0     | 0.0       |
| 100°-110° | 0.0     | 0.0       |
| 110°-120° | 0.0     | 0.0       |
| 120°-130° | 0.0     | 0.0       |
| 130°-140° | 0.0     | 0.0       |
| 140°-150° | 0.0     | 0.0       |
| 150°-160° | 0.0     | 0.0       |
| 160°-170° | 0.0     | 0.0       |
| 170°-180° | 0.0     | 0.0       |
| 0°-30°    | 19200.5 | 54.2      |
| 0°-40°    | 25403.0 | 71.7      |
| 0°-60°    | 32636.5 | 92.1      |
| 0°-90°    | 35418.0 | 100.0     |
| 90°-120°  | 0.0     | 0.0       |
| 90°-150°  | 0.0     | 0.0       |
| 90°-180°  | 0.0     | 0.0       |
| 0°-180°   | 35418.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°    | 22.5° | 45°   | 67.5° | 90°   | Flux  |
|-----|-------|-------|-------|-------|-------|-------|
| 0°  | 33323 | 33323 | 33323 | 33323 | 33323 |       |
| 5°  | 33018 | 33141 | 32727 | 32751 | 32713 | ###   |
| 15° | 31950 | 31208 | 28696 | 24403 | 22556 | 9019  |
| 25° | 29832 | 27326 | 16971 | 10676 | 7504  | 13746 |
| 35° | 26781 | 18880 | 4946  | 1164  | 566   | 16754 |
| 45° | 22894 | 10637 | 487   | 352   | 350   | 17656 |
| 55° | 18160 | 2191  | 333   | 301   | 135   | 16212 |
| 65° | 12514 | 232   | 174   | 111   | 71    | 12347 |
| 75° | 6228  | 54    | 71    | 94    | 74    | 6578  |
| 85° | 777   | 21    | 38    | 57    | 48    | ###   |
| 90° | 0     | 0     | 0     | 0     | 0     |       |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 22.5°   | 45°     | 67.5°   | 90°     |
|-------|---------|---------|---------|---------|---------|
| 0°    | 33322.8 | 33322.8 | 33322.8 | 33322.8 | 33322.8 |
| 2.5°  | 33108.9 | 33319.8 | 33070.9 | 33256.4 | 33403.7 |
| 5°    | 33018.5 | 33140.6 | 32726.8 | 32750.6 | 32712.6 |
| 7.5°  | 32859.9 | 32831.4 | 32135.6 | 31831.2 | 31698.1 |
| 10°   | 32620.7 | 32432.0 | 31316.1 | 30680.4 | 30217.5 |
| 12.5° | 32311.6 | 31889.9 | 30293.6 | 28272.4 | 27016.9 |
| 15°   | 31950.1 | 31208.2 | 28695.6 | 24402.9 | 22556.1 |
| 17.5° | 31518.9 | 30467.9 | 26083.2 | 20452.4 | 18803.9 |
| 20°   | 31010.0 | 29642.0 | 22757.3 | 17401.0 | 15795.2 |
| 22.5° | 30442.5 | 28637.0 | 19526.8 | 14461.9 | 12171.3 |
| 25°   | 29832.2 | 27326.0 | 16971.3 | 10676.4 | 7504.4  |
| 27.5° | 29126.8 | 25640.9 | 14574.5 | 6288.6  | 3829.9  |
| 30°   | 28380.2 | 23611.8 | 11786.0 | 3382.8  | 2325.6  |
| 32.5° | 27627.2 | 21311.6 | 8339.8  | 2113.1  | 1318.9  |
| 35°   | 26780.7 | 18879.9 | 4945.8  | 1163.5  | 566.0   |
| 37.5° | 25897.7 | 16651.2 | 2923.1  | 529.5   | 363.0   |
| 40°   | 24913.3 | 14614.2 | 1878.4  | 351.9   | 356.6   |
| 42.5° | 23962.2 | 12715.1 | 1057.4  | 347.1   | 353.5   |
| 45°   | 22893.7 | 10636.7 | 486.6   | 351.9   | 350.3   |
| 47.5° | 21788.8 | 8482.4  | 315.4   | 355.1   | 355.1   |
| 50°   | 20649.1 | 6065.1  | 313.9   | 363.0   | 353.5   |
| 52.5° | 19445.9 | 3784.0  | 326.6   | 361.5   | 290.1   |
| 55°   | 18160.3 | 2190.8  | 332.9   | 301.1   | 134.8   |
| 57.5° | 16828.7 | 1291.9  | 336.1   | 172.8   | 76.1    |
| 60°   | 15440.0 | 714.9   | 323.4   | 128.4   | 71.4    |
| 62.5° | 14008.5 | 340.8   | 255.2   | 120.6   | 69.7    |
| 65°   | 12513.6 | 231.5   | 174.3   | 110.9   | 71.4    |
| 67.5° | 10961.8 | 179.1   | 137.9   | 104.6   | 72.9    |
| 70°   | 9408.2  | 133.1   | 125.3   | 104.6   | 71.4    |
| 72.5° | 7829.4  | 90.4    | 104.6   | 106.2   | 71.4    |
| 75°   | 6228.3  | 53.9    | 71.4    | 93.6    | 74.4    |
| 77.5° | 4641.5  | 33.2    | 55.5    | 96.7    | 90.4    |
| 80°   | 3124.4  | 28.5    | 58.7    | 90.4    | 71.4    |
| 82.5° | 1834.2  | 25.4    | 57.1    | 69.7    | 57.1    |
| 85°   | 776.8   | 20.7    | 38.0    | 57.1    | 47.5    |
| 87.5° | 145.8   | 17.5    | 30.2    | 46.0    | 41.2    |
| 90°   | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     |



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— 0°-180°    - - 45°-225°    - - - 90°-270°







(END OF REPORT)